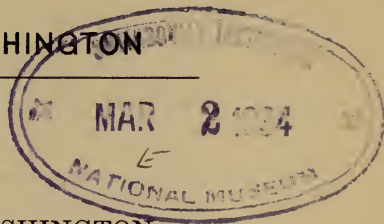


PROCEEDINGS  
OF THE  
BIOLOGICAL SOCIETY OF WASHINGTON



NOTES ON THE SPIDERS OF WASHINGTON  
COUNTY, UTAH.

BY R. V. CHAMBERLIN AND A. M. WOODBURY.

The spiders listed in the present paper were taken mostly at two localities in Washington County, which occupies the extreme southwestern corner of Utah; namely, St. George and Zion National Park. While some specimens were collected by the senior author in 1923 and in 1927 by far the greater number were secured by Mr. Woodbury, who, during the summer season, has served as naturalist for Zion National Park for several years past. We plan through further collecting to bring the list for the Park in particular to essential completeness. Types of the new species described are in the collection of the senior author.

THERAPHOSIDAE.

*Eurypelma steindachneri* (Ausserer).

St. George. Females and immature specimens are referred tentatively to this species.

DICTYNIDAE.

*Dictyna dactylata* Chamberlin.

St. George. Six females taken in 1925, 1926 and 1927. A form resembling *volucripes* but much smaller and with a different epigynum in which the septum typically ends caudally in a slender chitinous finger, though this may connect with the caudal rim which does not extend far laterad on each side as it does in *volucripes*.

*Dictyna volucripes* Keyserling.

St. George. One female referred to this species was taken several years ago by V. M. Tanner.

**Dictyna hoples** Chamberlin.

Zion National Park. One male. A species readily recognizable in the male sex by the enormously long, curved, distally bidentate apophysis of the tibia of the palpus. This is longer than in *armata* Emerton in which also the tooth on the chelicera is farther removed from the base.

**Dictynoides** sp.

Zion National Park. One immature female taken in 1927 can not be safely referred to its species.

SCYTOTIDAE.

**Loxosceles rufipes** (Lucas).

Zion National Park. Two females, not fully mature, seem to be this species.

**Plectreurus tristis** Simon.

Zion National Park. One young female.

**Diguetia canities** (McCook).

Zion National Park. One female of this highly interesting and rarely taken spider was secured in 1927.

GNAPHOSIDAE.

**Herpyllus piedicus** Chamberlin and Woodbury, new species.

*Male*.—Carapace yellowish red clothed with black hair of medium length. Sternum, legs reddish yellow. Abdomen dark gray with a wide longitudinal lighter band above and ventral region also lighter; basal dorsal scutum and epigastric plates deep yellow. Anterior row of eyes slightly procurved; median eyes nearly as large as the laterals, separated from each other by about their radius, half as far from the laterals; lateral eyes a little more than a radius from edge of clypeus. Posterior row of eyes nearly straight; median eyes oblique, nearly their longest diameter apart and three-fourths as far from the laterals; laterals circular, their diameter equalling the long axis of the medians, two thirds their diameter from anterior lateral on each side. Tibiae I and II with three pairs of spines beneath; metatarsi I and II with a pair of ventral spines at base. Characterized most readily by form of tibial apophysis of palpus. This in lateral view is seen to present a broader basal half and to be abruptly narrowed and flexed at middle, the distal half again running parallel to axis of the basal portion, slender and needle-like, straight; total length of apophysis slightly less than length of tibia without it.

Length, 7 mm.; length of cephalothorax, 3 mm.; width, 2 mm.; tib. pat. I, 3 mm.; tib. pat. IV, 3.5 mm.

*Locality*.—St. George. Two males.

**Herpyllus hesperolus** Chamberlin.

St. George and Zion National Park. Specimens from former locality taken in 1925 and 1928 and from latter in 1927.

**Pocillochroa montana** Emerton.

Zion National Park. Two females taken in 1927.

**Sergiolus lowelli** Chamberlin and Woodbury, new species.

*Male*.—Reddish yellow to reddish brown clothed with white pubescence and sparse black hairs. Sternum, chelicerae, palpi and legs reddish yellow, the legs clothed with white pubescence and long black hairs. Abdomen brown to blackish above, with three light transverse bands on basal half, these usually confluent at middle; venter light, with two black stripes diverging forward from spinnerets and gradually fading out. Anterior row of eyes procurved, the medians nearly a diameter apart but less than their radius from the laterals, medians and laterals subequal. Posterior row of eyes recurved; median eyes oblique, their shorter diameter apart and about the longer diameter from the laterals; lateral eye on each side about once and a half its diameter from the anterior lateral. Tibial apophysis of palpus long, in side view gradually narrowing distad, with acute apical portion slightly curved dorsad, its tip abruptly bent so as to produce a transverse ridge much as in *S. unimaculatus* and *S. decipiens*.

Length, 6 mm.; cephalothorax, 2.5 mm., width, 1.5 mm.

*Female*.—Coloration, spining of legs and eyes as in the male. Epigynum in general form somewhat like that of *S. variegatus* but anterior limiting rim weak at middle and bowed forward, not strongly angled caudad.

Length, 8 mm.; cephalothorax, 3.5 mm.; width, 2.5 mm.

*Locality*.—St. George. One male (holotype) and two females, the former taken Mar. 14, 1928, by Lowell A. Woodbury, the two latter in 1926.

**Gnaphosa gigantea** Keyserling.

St. George (one male and two immature females) and Zion National Park (two immature specimens).

**Gnaphosa hirsutipes** Banks.

St. George. One male taken in Dec., 1925.

**Callilepis zionis** Chamberlin and Woodbury, new species.

*Male*.—Entirely black excepting chelicerae and the legs, the latter being tinged with reddish distad of patellae, with the tarsi approaching yellowish. Anterior row of eyes procurved; eyes subequal; medians about their diameter apart, once and a half this distance from the laterals; laterals twice their diameter or a little more from edge of clypeus. Posterior row of eyes procurved; eyes subequal; medians twice their diameter apart, half as far from the laterals; lateral eye on each side separated from the corresponding anterior lateral by its diameter. Tibiae I and II with three pairs of ventral spines; metatarsi I and II with two pairs of ventral spines. Tibia III with median dorsal spine. Palpus of male with embolus at extreme anterior end of bulb, almost attaining end of cymbium, straight and short; tibia without distal apophysis such as present in *clara*.

Length, 8 mm.; cephalothorax, 4 mm., width, 2.5 mm.

*Locality.*—Zion National Park. One male taken in 1927, and one in 1928.

***Geodrassus gosiutus* Chamberlin.**

Zion National Park. One female, 1927.

***Rachodrassus flavus* Chamberlin and Woodbury, new species.**

*Male.*—Carapace dark yellow, clothed with short, grayish-black hairs. Sternum yellow, clothed with moderate grayish-black hairs which are more numerous toward edges, Palpi and legs yellow, usually rufous distally. Ground color of abdomen light yellow, with some darker areas confluent posteriorly, the basal plate slightly darker yellow. Anterior row of eyes straight or nearly so; median eyes slightly smaller than the laterals, nearly their radius apart and three-fourths as far from the laterals. Posterior row procurved; medians a little more than their diameter apart and a little less than their diameter from the laterals. Lateral eyes on each side equal, only about one-fourth their radius apart, their tubercles confluent. Tibia I and II with three pairs of ventral spines; metatarsi I and II with two pairs of ventral spines. Tibia III with one dorsal spine; tibia IV with two median dorsal spines in line. Palpus with tibial apophysis sublaminar, in lateral view a little clavately widening distad, the end narrowly rounded.

Length, 5 mm.; cephalothorax 2.25 mm., width, 1.7 mm. Tib. pat. I, 2 mm.; tib. pat. IV, 2.4 mm.

*Female.*—Posterior row of eyes less procurved than in the male. Epigynum presenting a lunate anterior rim and two lateral chitinous rims converging caudad and meeting at middle line, the general form suggesting that of *Gnaphosa hirsutipes*.

*Locality.*—St. George. One male (holotype) and one female. This species also occurs in southeastern Utah where it appears to be common.

***Haplodrassus dixiensis* Chamberlin and Woodbury, new species.**

*Female.*—Carapace reddish yellow, with sparse black hairs and fine, light colored pubescence. Sternum light reddish yellow. Chelicerae reddish brown. Palpi and legs yellowish, somewhat rufous distally. Anterior row of eyes procurved; laterals about once and a fourth the diameter of the medians; medians about their diameter apart, one-fourth as far from the laterals; the laterals their radius from margin of clypeus. Posterior row of eyes procurved; median eyes oblique, one-third their long axis apart; lateral eyes their diameter from median eyes and half as far from anterior laterals. Tibiae I and II without spines. Metatarsi with a pair of ventral spines at base. The epigynum presents a ridge on each side ending anteriorly freely as usual in the genus, the anterior end not at all cornuate.

Length, 7 mm. Cephalothorax, length, 2.5 mm.; width, 1.75 mm. Tib. pat. I, 2.5 mm.; tib. pat. IV the same.

*Locality.*—St. George. Two females, 1925, 1926.

**Zelotes subterreaneus** (Koch).

St. George. One male and two females taken in 1926.

**Drassyllus apachus** Chamberlin.

St. George. One adult male, an immature one and an immature female taken in 1927.

Described originally from a female. It is a common form in San Juan County and other parts of southeastern Utah. It occurs also in Arizona.

PHOLCIDAE.

**Psilochorus utahensis** Chamberlin.

St. George. Common.

**Physocyclus tanneri** Chamberlin.

St. George and Zion National Park. Males and females taken in 1925, 1926, and 1928.

THERIDIIDAE.

**Latrodectus mactans** (Fabricius).

St. George and Zion National Park. Common in both localities.

**Latrodectus geometricus** (C. Koch).

St. George. Chamberlin collection, 1923.

**Steatoda borealis** (Hentz).

St. George. A female taken in 1925.

**Steatoda grandis** Banks.

St. George. Chamberlin collection, 1923.

**Theridion placens** Keyserling.

St. George. Chamberlin coll., 1923, and A. M. Woodbury, 1926.

**Theridion canionis** Chamberlin.

Zion National Park. One female.

LINYPHIIDAE.

**Linyphia marginata** C. Koch.

St. George and Zion National Park. Common.

**Linyphia litigiosa** Keyserling.

Zion National Park. Five females taken in 1927.

**Linyphia tauphora** Chamberlin.

Zion National Park. One male and several females taken in 1927.

**Microneta** sp.

Zion National Park. Several females not to be identified with certainty without the males.

**Grammonota** sp.

St. George. Three females not specifically identifiable in absence of males.

**Pocadicnemis pumila** Blackwall.

Zion National Park. Many specimens, male and female, taken in 1927.

ARGIOPIDAE.

**Tetragnatha laboriosa** Hentz.

Zion National Park. Common.

**Tetragnatha extensa** (Linnaeus).

Zion National Park. Several males and females taken in 1925.

**Metargiope trifasciata** (Forskål).

St. George. Males and females taken in 1926.

**Neoscona benjamina** (Walckenaer).

St. George. Males and females.

**Neoscona naiba** Chamberlin.

St. George. Two females taken in 1926.

**Neoscona vertebrata** (McCook).

Washington County. One female, collected by Chamberlin in 1925.

**Aranea carbonaria** (L. Koch).

St. George. One female.

**Aranea gemma** (McCook).

Zion National Park. Females taken in 1927.

**Aranea varians** (Petrunkevitch).

Zion National Park. One female.

**Cyclosa conica** (Pallas).

Zion National Park. Abundant.

THOMISIDAE.

**Tmarus angulatus** (Walckenaer).

Zion National Park. Two immature females seem to be this species.

**Misumena vatia** (Clerck).

St. George and Zion National Park. Common.

**Misumenops utanus** Chamberlin.

One male from Zion National Park.

**Misumenops admes** Chamberlin.

Zion National Park. Several females.

**Xysticus nervosus** Banks.

St. George. Females.

**Xysticus gulosus** Keyserling.

St. George. One female taken in 1926.

**Xysticus simplicior** Chamberlin.

**Philodromus utus** Chamberlin.

St. George. Several females.

**Philodromus hoples** Chamberlin.

St. George. Apparently common here. Also known from San Juan and adjacent counties.

**Philodromus virescens** Thorell.

St. George. One male.

**Tibellus duttonii** Keyserling.

St. George. One female apparently this species.

AGELENIDAE.

**Agelena naevia** Walckenaer.

St. George and Zion National Park. Common.

**Agelena mimoides** Chamberlin.

St. George and Zion National Park. One male from each place.

**Agelena californica** Banks.

St. George. One female taken in 1926.

**Hahnia cinerea** Emerton.

Zion National Park. Common.

CLUBIONIDAE.

**Anyphaena gracilis** (Hentz).

Zion National Park. A male and an immature female taken in 1927.

**Anyphaena nigrifrons** Chamberlin and Woodbury, new species.

*Female*.—Carapace yellow, with brown and blackish granulations. often almost black in the ocular region and over the clypeus, carapace

clothed with sparse long dark hairs and more numerous fine grayish hairs. Sternum yellow, typically with a reddish patch opposite each coxa. Chelicerae dark reddish brown with anterior face black. Palpi and legs light yellow, with reddish tinge distally. Abdomen light yellow or whitish, with two longitudinal stripes above, these interrupted in young specimens and tending to disappear in old ones. Anterior row of eyes slightly re-curved; median eyes above three-fourths their diameter apart, their radius from the laterals, smaller than the laterals (1:1.25). Posterior row of eyes procurved; eyes about equal and equidistant, each adjacent two being separated by about their diameter; each lateral about its radius from the corresponding anterior lateral. Upper margin of furrow of chelicera with four teeth, the lower with a series of many fine teeth. Tibiae I and II with two pairs of ventral spines. Metatarsi I and II with a pair of spines at base beneath. Tibiae III and IV with two median dorsal spines. Epigynum presenting a lunate rim on each side; between the anterior ends of their lateral rims, but not touching them, a transverse rim concave on caudal side.

Length of female holotype, 6 mm.; cephalothorax, 2.5 mm.; width, 1.5 mm.; tib.+pat. I, 2.5 mm.; tib.+pat. IV, 2.5 mm.

*Locality.*—St. George. One mature and six immature females taken Dec., 1925, and one mature and four immature females taken Aug., 1927.

**Gayenna dixiana** Chamberlin and Woodbury, new species.

*Female.*—Carapace deep yellow with a row of dark maculations extending caudad from each posterior lateral eye. Sternum yellow. Palpi and legs yellow, becoming reddish distally. Abdomen light brown with dark brown or blackish maculations. Anterior row of eyes straight or nearly so; the medians about their diameter apart and three-fourths as far from the laterals; laterals about once and a fourth times the diameter of the medians, about their diameter from edge of clypeus. Posterior row of eyes also straight; medians their diameter or slightly more apart, a little less than their diameter from laterals; lateral eye of each side three-fourths its diameter from the anterior lateral of same side. Tibiae I and II with three pairs of spines beneath or I also with an unpaired extra spine. Tibiae III and IV with a single dorsal spine. Epigynum with a longitudinal, strongly chitinous rim on each side, the posterior ends of which are somewhat nearer to each other than are the anterior; between anterior ends a semicircular chitinous piece.

Length, 4.5 mm.; cephalothorax, 2 mm.; width, 1.5 mm. Length of tib. pat. I, 2.1 mm.; tib. pat. IV, 2.3 mm.

*Locality.*—St. George. One female.

**Clubiona pacifica** Banks.

Zion National Park. Two females.

**Chiracanthium inclusum** (Hentz).

St. George (one male, 1926, and one female, 1928, coll. by Grace A. Woodbury) and Zion National Park (one female, 1927).



**Phrurolithus woodburyi** Chamberlin.

Zion National Park. Males and females taken in 1927.

**Castianeira descripta** Hentz.

Zion National Park. One female.

**Castianeira zionis** Chamberlin and Woodbury, new species.

*Female*.—Carapace yellowish red, with ocular area black. Sternum reddish yellow with irregular dark markings. Palpi and legs yellowish with femora darker, somewhat reddish. Abdomen purplish black above with indistinct light crossbands, the venter light. Anterior row of eyes procurved; medians about once and a fourth their diameter apart, two-thirds their diameter from the laterals; diameter of laterals to medians as 1.25:1. Posterior row of eyes procurved; medians once and a half their diameter apart and a little more than the diameter from laterals; eyes equal in size; lateral on each side once and a half its diameter from the anterior lateral. Chelicerae with two teeth on each margin. Tibia I with two pairs of spines beneath; tibia II with two unpaired spines beneath. Metatarsi I and II with two pairs of ventral spines. Tibiae III and IV with a single dorsal spine. Epigynum presenting two well-separated openings behind leading into the spermatheca; then bent at middle with anterior globular enlargements nearly in contact at middle line.

Length, 6.5 mm. Length of cephalothorax, 2.5 mm.; width, 1.75 mm. Length of tib.+pat. I, 1.9 mm.; leg IV, 2.5 mm.

*Locality*.—Zion National Park. One female, 1927.

**Micaria formicoides** Chamberlin and Woodbury, new species.

*Female*.—Carapace reddish yellow, eye tubercles on black. Palpi yellow, reddish proximally. Legs yellow distally, brownish or blackish proximally. Abdomen constricted near middle; dark gray or blackish, a light line in constriction on each side. Anterior row of eyes procurved; median eyes about their diameter apart and half as far from the laterals; eyes subequal. Posterior row of eyes procurved in such degree that a line through centers of medians is tangent to posterior edges of laterals; diameter of medians to laterals as 1:1.5; lateral of each side its diameter from anterior lateral. Furrow of chelicera with a tooth on each margin. Epigynum as figured. Length, 4.5 mm. Length of cephalothorax, 1.75 mm.; width, 1 mm. Tib.+pat. I, 1.7 mm.; tib.+pat. IV, 1.5 mm.

*Locality*.—St. George. One female, 1927.

**Trachelas tranquillus** (Hentz).

St. George (four females, 1926) and Zion National Park (one male and two females, 1927).

**Trachelas deceptus** (Banks).

St. George. Two males and one female.

HETEROPODIDAE.

**Olios fasciculatus** Simon.

St. George (many specimens, 1925 and 1928) and Zion National Park (many specimens, 1925 and 1927).

LYCOSIDAE.

**Pardosa lapidicina** Emerton.

St. George and Zion National Park. Common along flood bed of the Virgin River.

**Pardosa sternalis** (Thorell).

St. George and Zion National Park. Common in wet places and along small streams where it is often seen running over the water.

**Lycosa antelucana** Montgomery.

St. George. Very common.

**Lycosa gosiuta** Chamberlin.

St. George (four females, 1926) and Zion National Park (seven specimens, 1927).

**Lycosa kochii** (Keyserling).

St. George (one female, 1925) and Zion National Park (one female, 1927).

**Arctosa littoralis** (Hentz).

St. George. Five specimens taken in 1926.

OXYOPIDAE.

**Oxyopes rufipes** Banks.

St. George. Several males and females probably this species.

ATTIDAE.

**Phidippus formosus** (Peckham).

St. George. One female.

**Phidippus workmani** Peckham.

St. George. Common.

**Dendryphantes militaris** (Hentz).

St. George. Eight specimens, males and females.

**Dendryphantes capitatus** (Hentz)

Zion National Park. Several females and an immature male.

**Dendryphantes diplacis** Chamberlin.

Zion National Park. Two males, 1927. Previously known from Lower California and Nogales, Arizona.

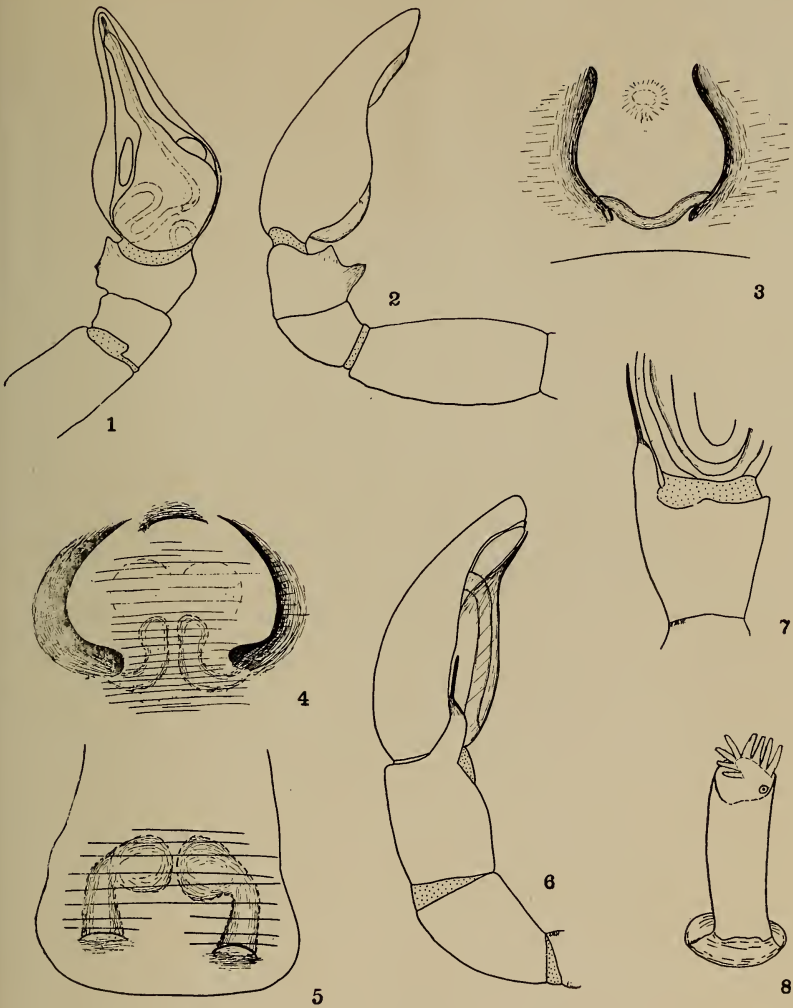


PLATE I.

- Fig. 1. Epigynum of *Rachodrassus flavus* sp. nov.
- Fig. 2. Right palpus, ectal view, of male *Rachodrassus flavus* sp. nov.
- Fig. 3. Right palpus, ectal view, of male *Drassyllus apachus* Chamb.
- Fig. 4. Ventral view of the same.
- Fig. 5. Epigynum of *Micaria formicoides* sp. nov.
- Fig. 6. Epigynum of *Haplodrassus dixiensis* sp. nov.
- Fig. 7. Epigynum of *Sergiolus lovelli* sp. nov.
- Fig. 8. Right palpus, ventral view, of male of same.

